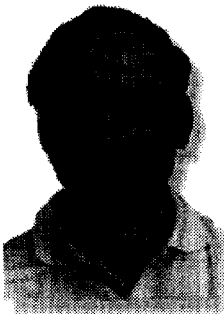


# Message From The President

**January 31, 1999**



*Mark Bundick*

Below is the text of a presentation to be made to staff members of the Bureau of Alcohol, Tobacco and Firearms on February 4. My hope is that the meeting will produce a big step forward in stabilizing the regulatory environment for NAR high power rocket flyers. However, I'd caution NAR members reading this that such stability, and in particular, any regulatory relief is not a given. The ATF is mandated to enforce laws passed by Congress, and changes in HPR regulation may ultimately force us to visit Capitol Hill and begin a lengthy, costly process to change the law. I'll post a summary of the meeting outcome as soon as possible afterwards. Until then, my thanks to NAR members who supplied comments helpful in creating this presentation.

## **A Presentation to the Bureau of Alcohol, Tobacco and Firearms on Sport Rocketry Issues Relevant to A Proposed NPRM**

### **Section 1: Technical Issues Regarding Explosives Use of AP Based Propellant**

#### **A. Explosives Potential**

Our associations consulted with engineers and technical experts regarding potential explosives use of ammonium perchlorate (AP) based rocket propellants. Based on this technical input, we believe AP propellants represent little, if any, threat for explosives use. In order for AP to be used most effectively as an detonable explosive, it must be formulated in ways which make it a bad rocket propellant. In particular AP would have to be:

- Ground to a size below 20 microns average;
- Combined with an additional accelerants not currently part of sport rocket motor propellant formulations;
- Removed from the binder used in propellant to improve its efficiency.

Even if these three criteria are met, AP in general does not propagate a adequate detonation wave, a key characteristic of a good high explosive.

A sport rocket propellant must be classified as UN 1.3 or 1.4 as a prerequisite to a motor with such propellant being accepted for certification testing by the NAR or TRA. Such motors must pass specific UN-standard tests conducted by the ATF of Explosives or Canadian equivalent that demonstrate that it is not detonable. The details of these tests may be found in "Recommendations on the Transport of Dangerous Goods: Tests and Criteria", United Nations publication ST/SG/AC.10/11 Rev. 1.

## **B. Weapons Potential**

We also consulted our engineering and technical experts regarding the potential use of high power rocket (HPR) materials for conversion to

- Suitable rocket vehicle;
- An explosive warhead and fusing mechanism;
- An accurate guidance system.

While HPR activity has created suitable rocket motors and vehicles for potential use as a weapon, relative payload capacities are relatively low. Our associations have no reports or evidence of hobby participants seeking development of warheads or fusing mechanisms. The most obvious barrier to successful weapons development would be the creation of an accurate guidance system. No commercial units exist in the hobby market for such guidance. None are required for hobbyist activities currently practiced or contemplated. Additionally, we believe that better point and area weapons available on the black market for those seeking to commit criminal or terrorist acts.

## **C. Criminal or Terrorist Potential**

None of the associations represented here know of any evidence of either AP propellant or HPR materials being used in support of a criminal or terrorist act. Our position is that if either AP propellant or HPR materials were suitable for such acts, their use would have been made known to the leadership within our organizations. If the ATF has evidence of pathological use of any AP propellants in criminal or terrorist activities, we respectfully request that the ATF share such information with us in an effort to further the education of our respective memberships as to the potential hazards of this material.

## **D. Intangible Considerations**

The sport rocketry community has developed considerable experience in the use and handling of larger HPR motors using AP propellant. Over the past decade considerable numbers of individuals have safely pursued their technical interests by participation in this hobby. We estimate that in the past decade, approximately 7,500 individuals have participated in one or more sponsored events. Flight experience has surpassed 50,000 with no significant injury or property damage. The user organizations have developed a structured program of user training and qualification that insures safe flight operations. Those qualification programs include reviews of the applicable law and regulations for possession, storage and use of these materials.

Further regulation of this user community will have a significant adverse impact on a recreational and educational activity that has demonstrated over the past decade a commitment to safe, legal operations.

## **Section 2: Legal Context for Rocket or AP Based Propellant Regulations**

### **A. Rocket Definitions**

A review of the United States Code (USC) and Code of Federal Regulation (CFR) finds that rockets are formally defined only as relates to flight operation as recognized by FAA. There is no legal definition for rocket in either the USC or CFR beyond that used by FAA. The FAA defines rockets in Title 14, Chapter 1, Part 101, and recognizes three categories of rocket activity:

**Model Rockets** - rockets which use less than four (4) ounces of slow burning propellant, constructed of paper, wood, or breakable plastic, containing no substantial metal parts and weighing not more than 16 ounces, including the propellant;

**Large Model Rockets** - rockets which use less than 4.4 ounces (125 grams) of slow burning propellant, constructed of paper, wood, or breakable plastic, containing no substantial metal parts and weighing not more than 53 ounces (1,500 grams), including the propellant;

**All Other Unmanned Rockets.**

The FAA allows unrestricted flight operations of model rockets as long as they are operated in a manner which does not present hazard to aircraft in the air or persons or property on the ground. This restriction is exactly the same as embodied in the Model Rocket Safety Code as listed in the appendix to NFPA Document 1122, Code for Model Rockets. Flight operations for large model rockets require notification to the appropriate FAA air traffic authority having jurisdiction for the airspace used for flight. Such notice must be presented 24 to 48 hours in advance of flight operations in writing. All other unmanned rocket launches required a formal waiver of the flight operations rules in Part 101. Waiver applications are routine matters for HPR launches nationwide.

## **B. Relevant ATF Definitions**

Rockets used for destructive purposes are already regulated under 18 U.S.C. Chapter 44, Section 921 (a) (4) (A) (iii) and 18 U.S.C. Chapter 53, Section 5845 (f) (1) (C) and Section 5845 (f) (3). Our associations submit that HPR rockets do not meet the definition of a destructive device, and thus are exempt from regulation under this portion of the statute.

Additionally, as currently written in 27 CFR Section 55.141 (a) (7), products with less than 4 ounces (113 grams) are currently exempted from ATF regulation. Our associations submit that any sport rocket products with less than this amount of material do not currently meet ATF's published definition for regulation and should be exempt from consideration for future regulation.

In informal conversations with ATF representatives in the past, reference has been made to limits in the Banned Hazardous Substance Act, Title 16, Chapter II, Sec. 1500.83 and Sec. 1500.85. Such regulation pertains solely to model rocket product which can be sold over the counter to persons less than 18 years of age. The BHSA regulations require all HPR hobby products be labeled to limit sales to persons over the age of 18. We do not believe that the BHSA limits are thus applicable to discussion of HPR products as they relate to ATF concerns.

From previous discussion, our understanding is that since the underlying 18 U.S.C. Chapter 40 requires annual publication of the list of regulated explosives, and since AP propellant is on the list, HPR motors are subject to regulation by the Agency. Our associations are not adverse to some level of regulatory oversight for larger quantities of AP based propellant. We recognize that the difficulty comes in balancing the needs of an educational and recreational community with the interest of public safety and the limits of the enabling legislation.

We believe that many of the concerns of the ATF and the interests of the consumer associations represented in this paper can be address with minor changes in existing CFR's. Our position on various aspects of suggested regulations now follows.

### **Section 3: Items for Discussion Prior to NPRM Publication**

#### **A. Overview of Association NPRM Position**

Given these constraints imposed with the USC, limited enforcement resources and relative size of threats posed by unregulated HPR motor usage, we submit that regulation of HPR motors is not in the national interest unless ATF has substantial evidence of illegal use. We recognize that the ATF is constrained by limits within the enabling legislation, and that some form of regulatory oversight was envisioned by the Congress at the time the Organized Crime Act became law.

#### **B. Propellant Issues**

Our associations respectfully submit that AP based propellants represent no significant threat to public safety. Field experience has not demonstrated pathological usage of the material, no significant increase in transportation risk and no consumer storage risk with such material in wide circulation over the past decade. We believe public interest and Congressional intent can be better served if AP based propellants, as currently formulated for sport rocket use, be removed from the annual list of explosives at the earliest opportunity.

NPRM Option A: We suggest that the next annual list of explosives be modified as follows:

Change "Ammonium perchlorate explosive mixtures" to "Detonable ammonium perchlorate explosive mixtures" or "Ammonium perchlorate explosive mixtures consisting of particles less than 20 micron size."

Other definitions of detonable ammonium perchlorate mixtures may simultaneously address ATF concner and exempting AP based propellants, as currently formulated for sport rocket use. Our associations are open to alternative definitions.

NPRM Option B: If ATF believes a gross quantity limit is in the public interest, we respectfully request that this limit be set at 20 ounces (566 grams). Current field experience shows that motors of this propellant weight meet the needs of more than 90% of hobby participants. Additionally, current technological constraints make construction of sport rocket motors with more than this quantity of propellant significantly more complex and difficult. In any case, due to the propellant weight limit in conformity with section 841(c) of Title 18, we do not believe any limit less than 4 ounces could be implemented in the new NPRM.

#### **C. Low Explosives User Permit (LEUP) Issues**

Per the ATF's stated intention in the August 15, 1998 Final Rule Notice, our associations support the creation of a special LEUP class for sport rocket flyers. We support and suggest that such permits be limited to sport rocket activities, and that any other use of the permit is prohibited. We believe such permits should be tightly defined, both for administrative ease on the part of the ATF, and to clearly meet the needs of the sport rocket community:

NPRM Option: For regulated materials used by sport rocket hobbyists, we request that the ATF establish:

1. a sport rocket oriented LEUP classification;
2. with a fee structure equal to the previous Type 34 limits, i.e. \$20-30 for initial application, \$10-15 for three year renewal;
3. inclusion of language that indicates a rocket only permit is strictly for the recreational and education purpose of flying sport rockets.

We believe the administration of limited purpose licenses for sport rocket users would simplify the ATF's effort while meeting Congressional mandates to regulate potential explosives materials as outlined in Title 18 and implemented in 27CFR55.

#### **D. Storage Issues**

While attempting to inform and encourage our association members towards compliance, we have found considerable confusion and inconsistency in the ATF's handling of compliance with storage provisions of Title 18 as implemented in 27CFR55. We believe field experience shows that problems revolve around handling of user applicants who do not wish to or cannot otherwise procure storage given their place of residence, or the consistent handling of those seeking variances from established magazine rules.

Our associations sought informal guidance from ATF personnel in development of suggested residential storage requirements. Those requirements were embodied in standardized codes promulgated by nonprofit safety organizations. We suggest language be included in the NPRM which clarifies the ATF's handling of storage issues in conformity with those model codes.

Absent any such clarifying language in the NPRM, our associations would request that we continue work with ATF to develop guidelines suitable for use by field inspectors, similar to an FAA Advisory Circular, to help make clear the uses and needs of the sport rocket user community. Such guidelines could meet the needs of the user community and simultaneously make the ATF field inspectors' job easier.

NPRM Option: We respectfully request that the NPRM establish:

1. a formal definition for handling user applicants who do not wish to store regulated materials; the language should make clear that such user applicants can purchase, use and fully consume regulated materials at a launch site only. The language should additionally required that unused materials be returned to an appropriately permitted party, dealer or individual who does have appropriate storage
2. small quantity exemption for home storage of sport rocketry products; a limit in conformity with DOT public transportation regulations (50 lbs, or 22.7 Kg) is suggested; (3) for sport rocketry LEUP holders who seek to obtain storage, formal adoption of the variances from published magazine standards; i.e. indoor storage in attached garages with 1 hour rated firewalls, and the type 4 indoor magazine as being acceptable for storage in an attached garage.

#### **E. Other NPRM Issues**

The following issues have been raised by members of our association as important, but they do not fall under particular categories.

A number of association members are foreign nationals who are not US citizens. Some live abroad and attend events in the US. Foreign nationals have obtained, used and continue to use materials which would

be regulated under some proposals as described informally and off the record by ATF personnel. Our associations believe that foreign nationals participation in our activities should be supported going forward.

An additional group of our memberships have noted a proposal to disallow sales of regulated items at sport rocket launch sites. ATF personnel have noted that the existing regulations require sales only at the established place of business noted in the dealer's license. We respect the ATF's need to have adequate and accurate record keeping available at the stated place of business, but submit that the record keeping can be done equally well at a launch site where sales are made. Such record keeping can be made easily available to the ATF within reasonable timeframes.

NPRM Option: We respectfully request that the NPRM establish:

1. Formal determination of the status of foreign nationals participation in regulated activities;
2. recognition of an explosives dealer's ability to make sales to sport rocket permit holders at launch sites provided appropriate records equivalent or better to those kept at the regular place of business are made available for inspection.

Mark B. Bundick, NAR

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As always, you can send me your comments [via email](#), or mail them to me at

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